

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 1-3, 8 and 46, cancel claims 62, 63, 67, 78, and 85, and add claims 99-120 as follows:

1. (Currently Amended) An expandable tubular member, [including] comprising:
  - a first tubular section having a first outer diameter comprising a first threaded connection;
  - an intermediate tubular section coupled to the first tubular section having an intermediate outer diameter; and
  - a second tubular section having a second outer diameter coupled to the intermediate tubular section having a second outer diameter comprising a second threaded connection;wherein the first and second outer diameters are greater than the intermediate outer diameter; and  
wherein the burst strength of the first and second tubular sections is substantially equal to the burst strength of the intermediate tubular section.
2. (Currently Amended) A method of fabricating an expandable tubular member, comprising:
  - providing a tubular member having a first end, a second end, and an intermediate portion;
  - radially expanding the first end and the second end of the tubular member;
  - forming a first threaded connection on the first end of the tubular member; and
  - forming a second threaded connection on the second end of the tubular member;and  
wherein the burst strength of the radially expanded first and second ends of the tubular member is substantially equal to the burst strength of the intermediate portion of the tubular member.
3. (Currently Amended) An apparatus, comprising:

a tubular member formed by the process of radially expanding an unexpanded tubular member into contact with an approximately cylindrical passage using an expansion cone, the unexpanded tubular member including:  
a first tubular section having a first outer diameter comprising a first threaded connection;  
an intermediate tubular section coupled to the first tubular section having an intermediate outer diameter; and  
a second tubular section having a second outer diameter coupled to the intermediate tubular section having a second outer diameter comprising a second threaded connection;  
wherein the first and second outer diameters are greater than the intermediate outer diameter; and  
wherein the burst strength of the first and second tubular sections is substantially equal to the burst strength of the intermediate tubular section.

4. (Original) A method of joining a first tubular member to a second tubular member, comprising:  
positioning at least a portion of the second tubular member within the first tubular member;  
radially expanding at least a portion of the second tubular member into contact with the first tubular member; and  
radially expanding the first and second tubular members;  
wherein the interior diameter of the radially expanded second tubular member is substantially equal to the interior diameter of the radially unexpanded portion of the first tubular member.

5. (Original) A tubular member, comprising:  
a first tubular member; and  
a second tubular member coupled to the first tubular member;  
wherein the first and second tubular members are coupled by the process of:

positioning at least a portion of the second tubular member within the first tubular member;  
radially expanding at least a portion of the second tubular member into contact with the first tubular member; and  
radially expanding the first and second tubular members;  
wherein the interior diameter of the radially expanded second tubular member is substantially equal to the interior diameter of the radially unexpanded portion of the first first tubular member.

6. (Original) A tubular member, comprising:

a first tubular member, including:

an upper portion; and

a lower portion; and

a second tubular member overlapping with and coupled to the lower portion of the first tubular member;

wherein the interior diameter of the upper portion of the first tubular member and the interior diameter of the second tubular member are substantially equal;

wherein the lower portion of the first tubular member is plastically deformed; and

wherein the second tubular member is plastically deformed.

7. (Original) An apparatus, comprising:

a first tubular member;

a second tubular member positioned in overlapping relation to the first tubular member;

an expansion mandrel positioned within the first tubular member including one or more outer surfaces for radially expanding the first and second tubular members;

a support member coupled to the expansion mandrel for supporting the expansion mandrel;

a first fluid conduit positioned within the expansion mandrel and the support member;

a packer sealingly coupled to the first tubular member and slidingly and sealingly coupled to the support member;  
a second fluid conduit coupled to the packer; and  
a pump fluidically coupled to the second fluid conduit.

8. (Currently Amended) An expansion cone for expanding a tubular member, comprising:

a one-piece housing including a tapered first end and a second end;  
one or more grooves [formed] defined in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves.

9. (Previously Presented) The expansion cone of claim 8, wherein the grooves comprise circumferential grooves.

10. (Previously Presented) The expansion cone of claim 8, wherein the grooves comprise spiral grooves.

11. (Previously Presented) The expansion cone of claim 8, wherein the grooves are concentrated around the axial midpoint of the tapered portion of the housing.

12. (Previously Presented) The expansion cone of claim 8, wherein the axial flow passages comprise axial grooves.

13. (Previously Presented) The expansion cone of claim 12, wherein the axial grooves are spaced apart by at least about 3 inches in the circumferential direction.

14. (Previously Presented) The expansion cone of claim 12, wherein the axial grooves extend from the tapered first end of the body to the grooves.

15. (Previously Presented) The expansion cone of claim 12, wherein the axial grooves extend from the second end of the body to the grooves.

16. (Previously Presented) The expansion cone of claim 12, wherein the axial grooves extend from the tapered first end of the body to the second end of the body.

17. (Previously Presented) The expansion cone of claim 8, wherein the flow passages are positioned within the housing of the expansion cone.

18. (Previously Presented) The expansion cone of claim 17, wherein the flow passages extend from the tapered first end of the body to the grooves.

19. (Previously Presented) The expansion cone of claim 17, wherein the flow passages extend from the tapered first end of the body to the second end of the body.

20. (Previously Presented) The expansion cone of claim 19, wherein the flow passages extend from the second end of the body to the grooves.

21. (Previously Presented) The expansion cone of claim 19, wherein one or more of the flow passages include inserts having restricted flow passages.

22. (Previously Presented) The expansion cone of claim 19, wherein one or more of the flow passages include filters.

23. (Previously Presented) The expansion cone of claim 8, wherein the cross sectional area of the grooves is greater than the cross sectional area of the axial flow passages.

24. (Previously Presented) The expansion cone of claim 8, wherein the cross-sectional area of the grooves ranges from about  $2 \times 10^{-4} \text{ in}^2$  to  $5 \times 10^{-2} \text{ in}^2$ .

25. (Previously Presented) The expansion cone of claim 8, wherein the cross-sectional area of the axial flow passages ranges from about  $2 \times 10^{-4} \text{ in}^2$  to  $5 \times 10^{-2} \text{ in}^2$ .

26. (Previously Presented) The expansion cone of claim 8, wherein the angle of attack of the first tapered end of the body ranges from about 10 to 30 degrees.

27. (Previously Presented) The expansion cone of claim 8, wherein the grooves are concentrated in a trailing edge portion of the tapered first end.

28. (Previously Presented) The expansion cone of claim 8, wherein the angle of inclination of the axial flow passages relative to the longitudinal axis of the expansion cone is greater than the angle of attack of the first tapered end.

29. (Previously Presented) The expansion cone of claim 8, wherein the grooves include:

- a flow channel having a first radius of curvature;
- a first shoulder positioned on one side of the flow channel having a second radius of curvature; and
- a second shoulder positioned on the other side of the flow channel having a third radius of curvature.

30. (Previously Presented) The expansion cone of claim 29, wherein the first, second and third radii of curvature are substantially equal.

31. (Previously Presented) The expansion cone of claim 8, wherein the axial flow passages include:

- a flow channel having a first radius of curvature;
- a first shoulder positioned on one side of the flow channel having a second radius of curvature; and
- a second shoulder positioned on the other side of the flow channel having a third radius of curvature.

32. (Previously Presented) The expansion cone of claim 31, wherein the first, second and third radii of curvature are substantially equal.

33. (Previously Presented) The expansion cone of claim 31, wherein the second radius of curvature is greater than the third radius of curvature.

34. (Previously Presented) A method of lubricating the interface between a tubular member and an expansion cone having a first tapered end and a second end during the radial expansion of the tubular member by the expansion cone, wherein the interface between the tubular member and the first tapered end of the expansion cone includes a leading edge portion and a trailing edge portion, comprising:  
injecting a lubricating fluid into the trailing edge portion.

35. (Previously Presented) The method of claim 34, wherein the lubricating fluid has a viscosity ranging from about 1 to 10,000 centipoise.

36. (Previously Presented) The method of claim 34, wherein the injecting includes:  
injecting lubricating fluid into the first tapered end of the expansion cone.

37. (Previously Presented) The method of claim 36, wherein the injecting includes:  
injecting lubricating fluid into the area around the axial midpoint of the first tapered end of the expansion cone.

38. (Previously Presented) The method of claim 34, wherein the injecting includes:  
injecting lubricating fluid into the second end of the expansion cone.

39. (Previously Presented) The method of claim 34, wherein the injecting includes:  
injecting lubricating fluid into the tapered first end and the second end of the expansion cone.

40. (Previously Presented) The method of claim 34, wherein the injecting includes:  
injecting lubricating fluid into the interior of the expansion cone.
41. (Previously Presented) The method of claim 34, wherein the injecting includes:  
injecting lubricating fluid through the outer surface of the expansion cone.
42. (Previously Presented) The method of claim 34, wherein the injecting includes:  
injecting the lubricating fluid into a plurality of discrete locations along the trailing  
edge portion.
43. (Previously Presented) The method of claim 34, wherein the lubricating fluid  
comprises:  
drilling mud.
44. (Previously Presented) The method of claim 42, wherein the lubricating fluid further  
includes:  
TorqTrim III;  
EP Mudlib; and  
DrillIN-Slid.
45. (Previously Presented) The method of claim 34, wherein the lubricating fluid  
comprises:  
TorqTrim III;  
EP Mudlib; and  
DrillIN-Slid.
46. (Currently Amended) A method of removing debris formed during the radial  
expansion of a tubular member by an expansion cone from the interface between the  
tubular member and the expansion cone, the expansion cone including a first tapered  
end and a second end, the interface between the tubular member and the first tapered



end of the expansion cone includes a leading edge portion and a trailing edge portion, comprising:

injecting a lubricating fluid into the trailing edge portion of the interface between the tubular member and the expansion cone.

47. (Previously Presented) The method of claim 46, wherein the lubricating fluid has a viscosity ranging from about 1 to 10,000 centipoise.

48. (Previously Presented) The method of claim 46, wherein the injecting includes: injecting lubricating fluid into the first tapered end of the expansion cone.

49. (Previously Presented) The method of claim 48, wherein the injecting includes: injecting lubricating fluid into the area around the axial midpoint of the first tapered end of the expansion cone.

50. (Previously Presented) The method of claim 46, wherein the injecting includes: injecting lubricating fluid into the second end of the expansion cone.

51. (Previously Presented) The method of claim 46, wherein the injecting includes: injecting lubricating fluid into the tapered first end and the second end of the expansion cone.

52. (Previously Presented) The method of claim 46, wherein the injecting includes: injecting lubricating fluid into the interior of the expansion cone.

53. (Previously Presented) The method of claim 46, wherein the injecting includes: injecting lubricating fluid through the outer surface of the expansion cone.

54. (Previously Presented) The method of claim 46, wherein the lubricating fluid comprises:  
drilling mud.

55. (Previously Presented) The method of claim 54, wherein the lubricating fluid further includes:

TorqTrim III;  
EP Mudlib; and  
DrillIN-Slid.

56. (Previously Presented) The method of claim 46, wherein the lubricating fluid comprises:

TorqTrim III;  
EP Mudlib; and  
DrillIN-Slid.

57. (Previously Presented) A tubular member, comprising:

an annular member, including:

a wall thickness that varies less than about 8 %;  
a hoop yield strength that varies less than about 10 %;  
imperfections of less than about 8 % of the wall thickness;  
no failure for radial expansions of up to about 30 %; and  
no necking of the walls of the annular member for radial expansions of up to about 25%.

58. (Previously Presented) A wellbore casing, comprising:

one or more tubular members, each tubular member including:

an annular member, including:

a wall thickness that varies less than about 8 %;  
a hoop yield strength that varies less than about 10 %;  
imperfections of less than about 8 % of the wall thickness;  
no failure for radial expansions of up to about 30 %; and  
no necking of the walls of the annular member for radial expansions of up to about 25%.

59. (Previously Presented) A method of forming a wellbore casing, comprising:  
placing a tubular member and an expansion cone in a wellbore; and  
displacing the expansion cone relative to the tubular member;  
wherein the tubular member includes:  
an annular member, including:  
a wall thickness that varies less than about 8 %;  
a hoop yield strength that varies less than about 10 %;  
imperfections of less than about 8 % of the wall thickness;  
no failure for radial expansions of up to about 30 %; and  
no necking of the walls of the annular member for radial expansions of up  
to about 25%.
60. (Previously Presented) A method of selecting a group of tubular members for  
subsequent radial expansion, comprising:  
radially expanding the ends of a representative sample of the group of tubular  
members;  
measuring the amount of necking of the walls of the radially expanded ends of  
the tubular members; and  
if the radially expanded ends of the tubular members do not exhibit necking for  
radial expansions of up to about 25%, then accepting the group of tubular  
members.
61. (Previously Presented) A method of selecting a group of tubular members,  
comprising:  
radially expanding the ends of a representative sample of the group of tubular  
members until each of the tubular members fail;  
if the radially expanded ends of the tubular members do not fail for radial  
expansions of up to about 30%, then accepting the group of tubular  
members.

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62. (Canceled)

63. (Canceled)

64. (Previously Presented) The expandable tubular member of claim 1, wherein the wall thicknesses of the first and second tubular sections is greater than the wall thickness of the intermediate tubular section.

65. (Previously Presented) The expandable tubular member of claim 1, further comprising:

- a first tubular transitional member coupled between the first tubular section and the intermediate tubular section; and

- a second tubular transitional member coupled between the second tubular section and the intermediate tubular section;

wherein the angles of inclination of the first and second tubular transitional members relative to the intermediate tubular section ranges from about 0 to 30 degrees.

66. (Previously Presented) The expandable tubular member of claim 1, wherein the outside diameter of the intermediate tubular section ranges from about 75 percent to about 98 percent of the outside diameters of the first and second tubular sections.

67. (Canceled)

68. (Previously Presented) The expandable tubular member of claim 1, wherein the first threaded connection comprises an internally threaded connection; and wherein the second threaded connection comprises an externally threaded connection.

69. (Previously Presented) The expandable tubular member of claim 1, wherein the ratio of the inside diameters of the first and second tubular sections to the interior diameter of the intermediate tubular section ranges from about 100 to 120 percent.

70. (Previously Presented) The expandable tubular member of claim 1, wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by the following expression:

$$D_{wellbore} - 2 * t_1 \geq D_1 \geq \frac{1}{t_1} [(t_1 - t_{INT}) * D_{CONE} + t_{INT} * D_{INT}]$$

wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .

71. (Previously Presented) The method of claim 2, further comprising:  
upsetting the first and second ends of the tubular member.

72. (Previously Presented) The method of claim 2, further comprising:  
stress relieving the radially expanded first and second ends of the tubular member.

73. (Previously Presented) The method of claim 2, further comprising:  
applying a protective coating onto the radially expanded first and second ends of the tubular member.

74. (Previously Presented) The method of claim 2, further comprising:  
applying a coating of a sealant onto the intermediate portion of the tubular member.

75. (Previously Presented) The method of claim 2, wherein the wall thicknesses of the radially expanded first and second ends of the tubular member is greater than the wall thickness of the intermediate portion.

76. (Previously Presented) The method of claim 2, further comprising:

forming a first tubular transitional member between the first end and the intermediate portion of the tubular member; and

forming a second tubular transitional member between the second end and the intermediate portion of the tubular member;

wherein the angles of inclination of the first and second tubular transitional members relative to the intermediate portion ranges from about 0 to 30 degrees.

77. (Previously Presented) The method of claim 2, wherein the outside diameter of the intermediate portion of the tubular member ranges from about 75 percent to about 98 percent of the outside diameters of the radially expanded first and second ends of the tubular member.

78. (Canceled)

79. (Previously Presented) The method of claim 2, wherein the first threaded connection comprises an internally threaded connection; and wherein the second threaded connection comprises an externally threaded connection.

80. (Previously Presented) The method of claim 2, wherein the ratio of the inside diameters of the first and second ends of the tubular member to the interior diameter of the intermediate portion of the tubular member ranges from about 100 to 120 percent.

81. (Previously Presented) The method of claim 2, wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the radially expanded first end portion, the radially expanded second end portion, and the intermediate portion, respectively, of the tubular

member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the radially expanded first end portion, the radially expanded second end portion, and the intermediate portion, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by the following expression:

$$D_{wellbore} - 2 * t_1 \geq D_1 \geq \frac{1}{t_1} [(t_1 - t_{INT}) * D_{CONE} + t_{INT} * D_{INT}]$$

wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .

82. (Previously Presented) The apparatus of claim 3, wherein the wall thicknesses of the first and second tubular sections is greater than the wall thickness of the intermediate tubular section.

83. (Previously Presented) The apparatus of claim 3, further comprising:

a first tubular transitional member coupled between the first tubular section and the intermediate tubular section; and

a second tubular transitional member coupled between the second tubular section and the intermediate tubular section;

wherein the angles of inclination of the first and second tubular transitional members relative to the intermediate tubular section ranges from about 0 to 30 degrees.

84. (Previously Presented) The apparatus of claim 3, wherein the outside diameter of the intermediate tubular section ranges from about 75 percent to about 98 percent of the outside diameters of the first and second tubular sections.

85. (Canceled)

86. (Previously Presented) The apparatus of claim 3, wherein the first threaded connection comprises an internally threaded connection; and wherein the second threaded connection comprises an externally threaded connection.

87. (Previously Presented) The apparatus of claim 3, wherein the ratio of the inside diameters of the first and second tubular sections to the interior diameter of the intermediate tubular section ranges from about 100 to 120 percent.

88. (Previously Presented) The apparatus of claim 3, wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by the following expression:

$$D_{wellbore} - 2 * t_1 \geq D_1 \geq \frac{1}{t_1} [(t_1 - t_{INT}) * D_{CONE} + t_{INT} * D_{INT}]$$

wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .

89. (Previously Presented) An expansion cone for radially expanding a tubular member, comprising:

an expansion cone body comprising a plurality of adjacent discrete tapered sections.

90. (Previously Presented) The expansion cone of claim 89, wherein the angle of attack of the adjacent discrete tapered sections increases in a continuous manner from one end of the expansion cone body to the opposite end of the expansion cone body.

91. (Previously Presented) An expansion cone for radially expanding a tubular member, comprising:



an paraboloid expansion cone body.

92. (Previously Presented) The expansion cone of claim 91, wherein the angle of attack of the outer surface of the paraboloid expansion cone body increases in a continuous manner from one end of the paraboloid expansion cone body to the opposite end of the paraboloid expansion cone body.

93. (Previously Presented) A method of forming a mono-diameter wellbore casing within a borehole formed within a subterranean formation, comprising:

- positioning a first wellbore casing within the borehole;
- coupling the first wellbore casing to the borehole;
- positioning a second wellbore casing within the borehole;
- overlapping at least a portion of the second wellbore casing with the first wellbore casing;
- radially expanding at least a portion of the second wellbore casing into contact with the first wellbore casing; and
- radially expanding the first and second wellbore casings;

wherein the interior diameter of the radially expanded portion of the second wellbore casing is substantially equal to the radially unexpanded portion of the first wellbore casing.

94. (Previously Presented) A mono-diameter wellbore casing formed within a borehole within a subterranean formation, comprising:

- a first wellbore casing coupled to and positioned within the borehole;
- a second wellbore casing coupled to the first wellbore casing by a process comprising:
  - positioning the second wellbore casing within the borehole;
  - overlapping at least a portion of the second wellbore casing with the first wellbore casing;
  - radially expanding at least a portion of the second wellbore casing into contact with the first wellbore casing; and

radially expanding the first and second wellbore casings;  
wherein the interior diameter of the radially expanded portion of the second wellbore casing is substantially equal to the radially unexpanded portion of the first wellbore casing.

95. (Previously Presented) The expansion cone of claim 8, wherein the housing comprises:

an expansion cone body comprising a plurality of adjacent discrete tapered sections.

96. (Previously Presented) The expansion cone of claim 95, wherein the angle of attack of the adjacent discrete tapered sections increases in a continuous manner from one end of the expansion cone body to the opposite end of the expansion cone body.

97. (Previously Presented) The expansion cone of claim 8, wherein the housing comprises:

an paraboloid expansion cone body.

98. (Previously Presented) The expansion cone of claim 97, wherein the angle of attack of the outer surface of the paraboloid expansion cone body increases in a continuous manner from one end of the paraboloid expansion cone body to the opposite end of the paraboloid expansion cone body.

99. (New) An expansion cone for expanding a tubular member, comprising:

a housing including a tapered first end and a second end;  
one or more grooves formed in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;

wherein the flow passages are positioned within the housing of the expansion cone;

wherein the flow passages extend from the tapered first end of the body to the second end of the body; and  
wherein one or more of the flow passages include inserts having restricted flow passages.

100. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves formed in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;  
wherein the flow passages are positioned within the housing of the expansion cone;  
wherein the flow passages extend from the tapered first end of the body to the second end of the body; and  
wherein one or more of the flow passages include filters.

101. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves formed in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;  
wherein the cross sectional area of the grooves is greater than the cross sectional area of the axial flow passages.

102. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves formed in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;  
wherein the angle of inclination of the axial flow passages relative to the longitudinal axis of the expansion cone is greater than the angle of attack of the first tapered end.

103. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves formed in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the  
circumferential grooves;  
wherein the grooves comprise:  
a flow channel having a first radius of curvature;  
a first shoulder positioned on one side of the flow channel having a second  
radius of curvature; and  
a second shoulder positioned on the other side of the flow channel having a third  
radius of curvature.
104. (New) The expansion cone of claim 103, wherein the first, second and third radii of curvature are substantially equal.
105. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves formed in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the  
circumferential grooves;  
wherein the axial flow passages comprise:  
a flow channel having a first radius of curvature;  
a first shoulder positioned on one side of the flow channel having a second  
radius of curvature; and  
a second shoulder positioned on the other side of the flow channel having a third  
radius of curvature.
106. (New) The expansion cone of claim 31, wherein the first, second and third radii of curvature are substantially equal.

107. (New) The expansion cone of claim 31, wherein the second radius of curvature is greater than the third radius of curvature.

108. (New) An expandable tubular member, comprising:

a first tubular section having a first outer diameter comprising a first threaded connection;

an intermediate tubular section coupled to the first tubular section having an intermediate outer diameter; and

a second tubular section having a second outer diameter coupled to the intermediate tubular section having a second outer diameter comprising a second threaded connection;

wherein the first and second outer diameters are greater than the intermediate outer diameter; and

wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by the following expression:

$$D_{wellbore} - 2 * t_1 \geq D_1 \geq \frac{1}{t_1} [(t_1 - t_{INT}) * D_{cone} + t_{INT} * D_{INT}]$$

wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .

109. (New) A method of fabricating an expandable tubular member, comprising:

providing a tubular member having a first end portion, a second end portion, and an intermediate portion;

radially expanding the first end and the second end portions of the tubular member;

forming a first threaded connection on the first end portion of the tubular member;  
and

forming a second threaded connection on the second end portion of the tubular member;

wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the first end portion, the second end portion, and the intermediate portion, respectively, of the tubular member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the first end portion, the second end portion, and the intermediate portion, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by the following expression:

$$D_{wellbore} - 2 * t_1 \geq D_1 \geq \frac{1}{t_1} [(t_1 - t_{INT}) * D_{cone} + t_{INT} * D_{INT}]$$

wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .

110. (New) An apparatus, comprising:

a tubular member formed by the process of radially expanding an unexpanded tubular member into contact with an approximately cylindrical passage using an expansion cone, the unexpanded tubular member comprising:

a first tubular section having a first outer diameter comprising a first threaded connection;

an intermediate tubular section coupled to the first tubular section having an intermediate outer diameter; and

a second tubular section having a second outer diameter coupled to the intermediate tubular section having a second outer diameter comprising a second threaded connection;

wherein the first and second outer diameters are greater than the intermediate outer diameter; and

wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the first tubular section, the second tubular section, and

the intermediate tubular section, respectively, of the tubular member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by the following expression:

$$D_{wellbore} - 2 * t_1 \geq D_1 \geq \frac{1}{t_1} [(t_1 - t_{INT}) * D_{CONE} + t_{INT} * D_{INT}]$$

wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .

111. (New) A method of fabricating an expandable tubular member, comprising:  
 providing a tubular member having a first end, a second end, and an intermediate portion;  
 radially expanding the first end and the second end of the tubular member;  
 upsetting the first and second ends of the tubular member thereby increasing the wall thicknesses of the first and second ends of the tubular member;  
 forming a first threaded connection on the upset first end of the tubular member;  
 and  
 forming a second threaded connection on the upset second end of the tubular member.
112. (New) A method of fabricating an expandable tubular member, comprising:  
 providing a tubular member having a first end, a second end, and an intermediate portion;  
 radially expanding the first end and the second end of the tubular member;  
 stress relieving the radially expanded first and second ends of the tubular member;  
 forming a first threaded connection on the stress relieved first end of the tubular member; and

forming a second threaded connection on the stress relieved second end of the tubular member.

113. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves defined in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;  
wherein the grooves comprise spiral grooves.
114. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves defined in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;  
wherein the axial flow passages comprise axial grooves.
115. (New) The expansion cone of claim 114, wherein the axial grooves extend from the tapered first end of the body to the grooves.
116. (New) The expansion cone of claim 114, wherein the axial grooves extend from the second end of the body to the grooves.
117. (New) The expansion cone of claim 114, wherein the axial grooves extend from the tapered first end of the body to the second end of the body.
118. (New) An expansion cone for expanding a tubular member, comprising:  
a housing including a tapered first end and a second end;  
one or more grooves defined in the outer surface of the tapered first end; and  
one or more axial flow passages defined by the housing fluidically coupled to the circumferential grooves;  
wherein the housing comprises:



an paraboloid expansion cone body.

119. (New) The expansion cone of claim 118, wherein the angle of attack of the outer surface of the paraboloid expansion cone body increases in a continuous manner from one end of the paraboloid expansion cone body to the opposite end of the paraboloid expansion cone body.

120. (New) An expandable tubular member, comprising:

a first tubular section having a first outer diameter comprising a first threaded connection;

an intermediate tubular section coupled to the first tubular section having an intermediate outer diameter; and

a second tubular section having a second outer diameter coupled to the intermediate tubular section having a second outer diameter comprising a second threaded connection;

wherein the first and second outer diameters are greater than the intermediate outer diameter; and

wherein the relationship between the wall thicknesses  $t_1$ ,  $t_2$ , and  $t_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, the inside diameters  $D_1$ ,  $D_2$  and  $D_{INT}$  of the first tubular section, the second tubular section, and the intermediate tubular section, respectively, of the tubular member, and the inside diameter  $D_{wellbore}$  of a wellbore casing that the tubular member will be inserted into, and the outside diameter  $D_{cone}$  of an expansion cone that will be used to radially expand the tubular member within the wellbore casing is given by a predetermined functional relationship, wherein  $t_1 = t_2$ ; and wherein  $D_1 = D_2$ .